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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/087,508	03/01/2002	Seiji Yoshimura	4321	4072

21553 7590 12/23/2004

FASSE PATENT ATTORNEYS, P.A.  
P.O. BOX 726  
HAMPDEN, ME 04444-0726

EXAMINER
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MERCADO, JULIAN A

ART UNIT	PAPER NUMBER
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1745

DATE MAILED: 12/23/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

## Office Action Summary

**Application No.**

10/087,508

**Applicant(s)**

YOSHIMURA ET AL.

**Examiner**

Julian Mercado

**Art Unit**

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 04 October 2004.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-11 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 1-4 is/are allowed.
- 6) ☒ Claim(s) 5-11 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some \* c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date \_\_\_\_\_
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_\_

## DETAILED ACTION

### *Remarks*

This Office action is responsive to applicant's amendment filed October 4, 2004.

### *Claim Rejections - 35 USC § 112*

The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

Claims 5-11 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention.

Claims 5-11 all recite that the battery is a lithium *primary* battery. [emphasis added] The examiner acknowledges applicant's citation of portions of the specification, specifically, in alleged support of new claims 5 and 11, page 7 lines 13-15 which reads:

The discharge capacity of the produced lithium battery was 100 mAh and the internal resistance of the battery before storage was about 15  $\Omega$ .

and page 9 lines 3-14 which reads:

Each battery of the Examples and the Comparative Examples produced in the above-described manner, immediately after the battery production, was discharged to 2V at an electric current value of 10 mA at 25.degree. C. to measure the discharge capacity before storage. Further, each battery after stored for 3 months at 70.degree. C. was discharged to 2V at an electric current value of 10 mA at 25.degree. C. to measure the discharge capacity after storage. Based on the following formula, the self-discharge rate of each battery was calculated:

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self-discharge rate (%)= [(discharge capacity before storage-discharge capacity after storage)/(discharge capacity before storage)] x 100

The cited portions above are *not* considered limited to *primary* batteries such as recited in the new claims. It appears to the examiner that applicant may be relying heavily on the portion of the specification cited above which reads that the battery was discharged “immediately after the battery production”. The specification is unclear, however, if by “immediately” discharging the battery, the requisite step of charging a battery (such as in a secondary cell) is precluded. There are other uncertainties, since the term “immediately” is a relative term.

Additionally, the portion of the specification cited above states that “immediately after the battery production” the battery “was discharged”. Applicant’s claims, however, are not a direct correlation to the foregoing. Claim 5, for example, recites that the battery “is manufactured in an initially charged condition and is not for recharging”.

Therefore, it cannot be said that this portion of the disclosure support the new claims further limiting the invention to primary batteries and their modes of operation and effects such as “being manufactured in an initially charged condition” and “not for recharging”. New claims 5-11, by reciting the lithium battery as either a primary battery or mode of operation thereof at the initial as-manufactured condition of the positive electrode, are therefore considered to be new matter.

### ***Priority***

Receipt is acknowledged of papers submitted under 35 U.S.C. 119(a)-(d), which papers have been placed of record in the file.

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***Claim Rejections - 35 USC § 103***

The rejection of claims 1-3 under 35 U.S.C. 103(a) based on JP 9-270259 and Ebel et al. (U.S. Pat. 5,114,811) has been withdrawn.

The rejection of claims 1-4 under 35 U.S.C. 103(a) based on JP 2001-52698 and Ebel et al. has been withdrawn.

***Allowable Subject Matter***

Claims 1-4 are allowed.

The following is an examiner's statement of reasons for allowance: the prior art of record does not teach or suggest a lithium battery having manganese dioxide as the positive electrode having boron and aluminum in the claimed weight percent range.

Upon further consideration, JP '259 and JP '698, in teaching a lithium transition metal oxide such as lithium manganese oxide, is not readable on the claimed manganese dioxide for the positive electrode material. The examiner acquiesces with applicant's assertions that a manganese dioxide material for a positive electrode is characteristic of a primary battery.

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. U.S. Pat. 5,578,395 to Yoshimura et al. is cited to teach a lithium battery having a positive electrode containing manganese dioxide. (Table 1) The examiner notes that independent claim 1 and new independent claim 11 both recite manganese dioxide in the positive electrode, the manganese dioxide containing boron at 0.1 to 3 weight percent. To the extent that this reference may be applicable towards claim 1 in that the claim does not preclude a *composite* transition metal oxide material

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which contains manganese dioxide [emphasis added], Yoshimura et al. teaches a composite of lithium manganese dioxide and manganese dioxide as containing boron at an atomic ratio of 0.01 to 0.20 relative to manganese. (col. 2 line 30-35) Given that boron has an atomic weight of 10.81 and manganese is 54.94, boron is present at 0.002 to 0.040 weight percent of manganese which is outside applicant's claimed range; this weight percent range is even less when relative to manganese dioxide.

Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

### *Conclusion*

**THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the mailing date of this final action.

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Any inquiry concerning this communication or earlier communications from the examiner should be directed to Julian Mercado whose telephone number is (571) 272-1289. The examiner can normally be reached on Monday through Friday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Patrick J. Ryan, can be reached on (571) 272-1292. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308-0661.



Gregg Cantelmo  
Gregg Cantelmo  
Primary Examiner  
A.U. 1745